

Applications

Non-metallic optical fibre external use with optimum protection against rodents and environmental factors.

Design

1. Loose Buffer Tube

PBT,
12 optical fibres per tube

1.1 Fibre Colours

Fibre Colours: (1) Blue; (2) Orange; (3) Green; (4) Brown; (5) Gray; (6) White; (7) Red; (8) Black; (9) Yellow; (10) Violet; (11) Pink; (12) Turquoise

1.2 Tube/Loose Tube Buffer Colours

Refer to table.

1.3 Filler (where applicable)

Coding according to EIA - TIA 598 and colours as defined according to IEC 60304.

1.4 Filler (where applicable)

Black. Loose buffer tubes without fibres.

2. Central Strength Member
FRP, Water Blocked, Dielectric central strength member.

3. Cable Core

FRP + Loose Tubes/Fillers.

4. Water Blocking

Dry Yarns and tapes.

5. Inner Sheath

Polyethylene.

6. Protection against Rodents

Polymer coated corrugated steel tape bonded to outer sheath.

7. Outer Sheath

Polyethylene.



96f Cable

Sheath Markings

As per customer requirement.
e.g. Product details and metre marking
BT Cables
Manufacturer Year
Operator Identification
Number of Fibres and Fibres per tube

Loose Tube Colour Scheme

No. of Fibres	T 1	T 2	T 3	T 4	T 5	T 6	T 7	T 8
24	Blue	Orange	Black*	Black*	Black*	Black*		
36	Blue	Orange	Green	Black*	Black*	Black*		
48	Blue	Orange	Green	Brown	Black*	Black*		
96	Blue	Orange	Green	Brown	Grey	White	Red	Black

N.B. Black* - Filler/Loose buffer tube without fibres

Cable Structure, Dimensions and Weights

No. of Fibres	Number of Tubes and Fillers		Number of Fibres per Tube	Nominal Diameter (mm)	Nominal Weight (kg/km)
24	2	4	12	14.2	210
36	3	3	12	14.2	210
48	4	2	12	14.2	210
96	8	0	12	15.0	235

Optical and Geometric Characteristics – Type Singlemode SM2: 9/125 G.652D

Attenuation (Typical/Maximum)		Chromatic Dispersion Coefficient		Individual Fibre PMD	Cable Cut-off Wavelength	Mode Field Diameter		Cladding Diameter	Coating Diameter
dB/km		(ps/(nm.km))		(ps/√km)	nm	μm	μm	μm	μm
1310 nm	1550 nm	1310 nm	1550 nm			1310 nm			
≤0.34	≤0.21	≤3.0	≤18	≤0.10	≤1260	9.2 ± 0.40	10.4 ± 0.50	125 ± 0.70	240 ± 5

Mechanical / Environmental Characteristics of Cable

CHARACTERISTIC	Test Specification	REQUIREMENT	VALUE/PERFORMANCE
TENSILE LOAD (MAX.)	IEC 60794-1-E1	- No change in attenuation, before and after load.	2700 N
CRUSH RESISTANCE	IEC 60794-1-E3	- No attenuation increase	30 N/mm
IMPACT RESISTANCE	IEC 60794-1-E4	- No attenuation increase	10 J
BENDING RADIUS	IEC 60794-1-E11 Proc.1	- No attenuation increase	Bend Radius: 20 X Cable Diameter
TEMPERATURE RANGE	IEC 60794-1-F1	- Operation	-25 °C to + 70 °C
WATER PENETRATION	IEC 60794-1-F5	- 3m Sample of cable with 1m head of water, end fed.	No water leakage in 24 hours under first layer.